

30. A lyophilisate of 4-isopropyl-3-methylsulfonylbenzoylguanidine methanesulfonate, that has been prepared by the process according to claim 13.

REMARKS

Applicants request the entry of claims 26-30 drawn to lyophilisates and pharmaceutical compositions comprising the claimed compounds prepared by the process of claim 13.

Applicants elect with traverse the following species for further prosecution:

N-[2-methyl-4,5-bis-(methylsulfonyl)benzoyl]-guanidine hydrochloride. Claims 13-14, 16, 18-25, and newly added 26-28 read on the elected species. No new matter is added.

Applicants, upon the allowance of the elected species, respectfully request the consideration of the claims drawn to non-elected species as provided by 37 CFR 1.141.

The Office Action alleges that the species lack a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding technical features, i.e., have different chemical structures that have different physical properties. The current claims are process of preparing and product by process of preparing claims directed at lyophilisates of three specific compounds. The process of preparing each lyophilisate is claimed to be the same, i.e., are claimed together in the alternative in claim 13, i.e., form a Markush group.

Under MPEP § 1850 “[w]hen the Markush grouping is for alternatives of chemical compounds, they shall be regarded as being of a similar nature where the following criteria are fulfilled:

- (A) All alternatives have a common property or activity; and
- (B) (1) A common structure is present, i.e., a significant structural element is shared by all of the alternatives; or
- (C) (2) In cases where the common structure cannot be the unifying criteria, all alternatives belong to a recognized class of chemical compounds in the art to which the invention pertains.

These sections will be named MPEP § 1850(A), (B) or (C) hereinafter.

The specification on page 4, line 22 to page 5, line 13, teaches that all three compounds in the Markush group are known prior art NHE inhibitors. The compounds thus

all have a common property or activity satisfying MPEP § 1850(A).

MPEP § 1850(B) and (C) are in the alternative form, i.e., connected by the “or” phrase, thus, applicants need only satisfy one of these sections.

MPEP § 1850 teaches that “[i]n paragraph (C)(2), above, the words ‘recognized class of chemical compounds’ mean that there is an expectation from the knowledge in the art that members of the class will behave in the same way in the context of the claimed invention. In other words, each member could be substituted one for the other, with the expectation that the same intended result would be achieved.” The specification teaches that:

“In the process according to the invention, the dissolution, filtration or sterile filtration and the drawing-off are carried out analogously to the known process. Then, however, the freeze drier is charged with the corresponding prepared vials at room temperature, and these vials are re-warmed to 30° - 95°C in the apparatus. The freezing phase is started from this elevated temperature and brought to the desired freezing temperature as quickly as possible. The drying phase is then carried out in the usual manner.

Due to the re-warming of the solutions, the saturation solubility is significantly increased, which is attributable to the reduction in the size of the water clusters. The increased solubility thus results in improved hydration. In the case of rapid cooling, firstly the water molecules lack the time to form relatively large clusters, and secondly the active ingredient molecules lack the time to arrange themselves into crystal nuclei. The resultant product is accordingly amorphous and can be reconstituted in a particle-free manner.” See specification on page 3, line 21 to page 4, line 4.

The Office Action did not establish that one of skill in the art would expect from the knowledge in the art that members of the Markush group will not behave in the same way in the context of this invention. The allegation that the compounds have different physical properties, such as melting point, vapor pressure, crystallization, solubility, etc., does not change the expected behavior of any of these compounds under the specified conditions in the claimed process. MPEP § 1850(C) is thus satisfied. The restriction requirement should therefore be withdrawn. Reconsideration is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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